

REMARKS

Claims 1-26 remain in the present application. Claims 1, 8 and 23 are amended herein. Applicant respectfully submits that no new matter has been added as a result of the claim amendments. Applicant respectfully requests further examination and reconsideration of the rejections based on the arguments set forth below.

Claim Rejections – 35 U.S.C. §103

Claims 1-2, 5-10, 12 and 17-24

Claims 1-2, 5-10, 12 and 17-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over United States Patent Number 5,742,142 to Witt (referred to herein as “Witt”) in view of United States Patent Number 4,706,180 to Wills (referred to herein as “Wills”). Applicant has reviewed the cited references and respectfully submits that the embodiments of the present invention as recited in Claims 1-2, 5-10, 12 and 17-24 are not rendered obvious by Witt in view of Wills for the following reasons.

Applicant respectfully directs the Examiner to independent Claim 1 that recites a fan speed controller comprising (emphasis added):

a pulse width modulation generator for generating a pulse width modulation signal, said pulse width modulation generator further for generating a complement of said pulse width modulation signal, wherein an operating frequency of said pulse width modulation generator is approximately within the range of 200-1,000 KHz; and

a drive stage circuit coupled to said pulse width modulation generator and for switch mode converting a supply voltage into a linear voltage for driving a fan, wherein a voltage level of said linear voltage is a function of said pulse width modulation signal, and wherein said drive stage circuit is further for switch mode converting said supply voltage into

said linear voltage in accordance with said pulse width modulation signal and said complement of said pulse width modulation signal.

Independent Claims 8 and 23 recite limitations similar to independent Claim 1. Claims 2, 5-7, 9-10, 12, 17-22 and 24 depend from their respective independent Claims and recite further limitations to the claimed invention.

Page 2 of the rejection states that Witt fails to teach or suggest the limitations of “wherein said drive stage circuit is further for switch mode converting said supply voltage... in accordance with said pulse width modulation signal and said complement of said pulse width modulation signal” as recited in independent Claim 1. Applicant concurs and further submits that Witt also fails to teach or suggest the limitations of “wherein said drive stage circuit is further for switch mode converting said supply voltage into said linear voltage in accordance with said pulse width modulation signal and said complement of said pulse width modulation signal” as recited in independent Claim 1.

Applicant respectfully submits that Wills, either alone or in combination with Witt, also fails to teach or suggest the limitations of “wherein said drive stage circuit is further for switch mode converting said supply voltage into said linear voltage in accordance with said pulse width modulation signal and said complement of said pulse width modulation signal” as recited in independent Claim 1. In contrast to the claimed embodiments, Applicant understands Wills to teach a circuit for driving a single phase AC induction motor with an AC signal (Abstract; Figures 1 and 2). Applicant respectfully submits that an AC signal as taught by Wills is very different from a linear voltage (e.g., a DC signal) as

claimed. As such, even assuming *arguendo* that Wills teaches a drive circuit for switch mode converting a supply voltage in accordance with a pulse width modulation signal and a complement of the pulse width modulation signal as claimed, Applicant respectfully submits that Wills teaches away from the claimed embodiments by teaching that the supply voltage is switch mode converted into an *AC signal* (e.g., “F” as shown in Figure 2 of Wills) instead of a *linear voltage* as claimed.

For these reasons, Applicant respectfully submits that independent Claim 1 is not rendered obvious by Witt in view of Wills, thereby overcoming the 35 U.S.C. §103(a) rejection of record. Since independent Claims 8 and 23 recite limitations similar to those discussed above with respect to independent Claim 1, independent Claims 8 and 23 also overcome the 35 U.S.C. §103(a) rejection of record. Since Claims 2, 5-7, 9-10, 12, 17-22 and 24 depend from and recite further limitations to the invention claimed in their respective independent Claims, Claims 2, 5-7, 9-10, 12, 17-22 and 24 also overcome the 35 U.S.C. §103(a) rejection of record. Therefore, Claims 1-2, 5-10, 12 and 17-24 are allowable.

Claims 3-4, 11, 13-16 and 25-26

Claims 3-4, 11, 13-16 and 25-26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Witt in view of Wills and further in view of United States Patent Number 6,801,004 to Frankel et al. (hereafter referred to as “Frankel”). Applicant has reviewed the cited references and respectfully submits that the embodiments of the present invention as recited in Claims 3-4, 11, 13-16 and 25-

26 are not rendered obvious by Witt in view of Wills and further in view of Frankel for the following reasons.

Applicant respectfully submits that Frankel, either alone or in combination with Witt and/or Wills, fails to cure the deficiencies of the cited Witt/Wills combination discussed above with respect to independent Claim 1. Specifically, Applicant respectfully asserts that Frankel also fails to teach or suggest the limitations of “wherein said drive stage circuit is further for switch mode converting said supply voltage into said linear voltage in accordance with said pulse width modulation signal and said complement of said pulse width modulation signal” as recited in independent Claim 1, and similarly recited in independent Claims 8 and 23. Since dependent Claims 3-4, 11, 13-16 and 25-26 recite further limitations to the invention claimed in their respective independent Claims, dependent Claims 3-4, 11, 13-16 and 25-26 are not rendered obvious by Witt in view of Wills and further in view of Frankel. Therefore, Claims 3-4, 11, 13-16 and 25-26 are allowable.

CONCLUSION

Applicant respectfully submits that Claims 1-26 are in condition for allowance and Applicant earnestly solicits such action from the Examiner.

The Examiner is urged to contact Applicant's undersigned representative if the Examiner believes such action would expedite resolution of the present application.

Please charge any additional fees or apply any credits to our PTO deposit account number: 50-4160.

Respectfully submitted,

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